

THOMAS TROTTER, M.D.

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THE peculiar interest in the lives of those who have striven and deserved but have not attained success as ordinarily estimated may be prompted by various reasons; partly by speculation as to the causes of this failure and partly by sympathy with the want of the arts of success and with betrayal by the fickle Goddess, for according to Samuel Butler in "Hudibras"

Success, the mark no mortal wit,
Or surest hand, can always hit.

The man who fails to achieve the reputation or recognition which he considers his due may according to his disposition be thus either embittered or stimulated by divine discontent to outdo his former efforts. There is indeed something to be said in favour of triumph deferred and specially of not attaining the supreme ambition, for when this is done the restless energy that inspired activity may be met by the question what farther object is there for life and labour. Examples of collapse and death soon after, and possibly favoured by, the advent of the prize long awaited would not be difficult to quote. The manner in which success or failure is borne is an index of character, and though it may be true that success is more difficult to bear than the reverse, the problems involved by apparent failure are the more interesting. But here we can hardly avoid the question, What is true success? Shall we agree with Macbeth that it is the possession of "honour, love, obedience, troops of friends," or that it turns on the verdict of posterity such as may be very roughly estimated by inclusion in the Dictionary of National Biography, which may indeed be merely evidence of notoriety, or that it is something higher though less tangible and suggested in a negative fashion by the reflection "What shall it

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profit a man if he gain the whole world and lose his own soul?" The narrower question of what constitutes success in the medical profession would serve, and possibly has been used, as an attractive text for the old-fashioned introductory address at the beginning of the winter session. But meanwhile two *obiter dicta* on the subject may be quoted. Cabot in his recent "Training and Rewards of the Physician" (1918), points out that to the world apparent failure may mean more than success, and that many an inventor has failed to earn a living. Thomas Young, the most comprehensive genius and greatest man of science who ever became a member of our profession, was not a success in practice, being regarded by the students of St. George's Hospital as "a great philosopher but a bad physician." In discussing the relation between ability and success he makes the rather remarkable statement that "However inadequate the possession of superior talents alone may be to ensure the confidence of the public, it must be a mistaken opinion, although it has been asserted by persons of no ordinary observation, that a man of great abilities is morally incapable of being a good physician." (1)

These remarks are by way of introducing and perhaps justifying the choice of Thomas Trotter, Physician to the Fleet, a would-be reformer of the Medical Department of the Navy, and poetaster, as the subject of this short contribution. Though included in the Dictionary of National Biography he is practically forgotten, and it is only too obvious from his writings that he was not satisfied with his lot; thus more than once he rather querulously complains of the opposition and hostility offered to his measures of reform in the Navy. He was overshadowed by his senior contemporary Sir Gilbert Blane, whom in company with the elder Lind he not infrequently criticised and more rarely praised. Blane attained a lasting position of authority in the Naval Medical world after less than four years' (1779-1783) service afloat, thereby gaining a pension of ten shillings a day, subsequently raised in 1802, on the conclusion of his work on the Board of the Sick and Hurt, to a pound a day, and spent the rest of his life in London engaged in a lucrative practice and moving in the highest medical circles of the day. Though Trotter often refers directly or indirectly to Blane, he does not appear to have obtained any public recognition in return; and more-

over when he retired in 1802 his pension (£200) was much less than that awarded to his elder Scottish colleague, although they began their sea service about the same time—Blane in the first instance (1779) as private physician to Sir George Rodney, who very shortly afterwards appointed him official Physician to the Fleet, and Trotter in 1778 as Surgeon's Mate, a progress prophetic of their future positions. It is perhaps only extremely human of Trotter that he did not love his more successful colleague.

Thus Trotter attacked Blane indirectly in his letter to Lord St. Vincent containing among his "proposals for meliorating the establishment of medical officers" the recommendation that no surgeon should be promoted to the rank of physician under five years' service, and that their degrees should be obtained in a regular manner from the universities where they have studied the usual number of terms. (2) In his list of three physicians who have fulfilled the last condition his own name appears, but not that of Blane, and he adds a note that all the others including all the Commissioners of Sick and Hurt (Blane was a member at this date, 1801) have obtained their M.D. degrees by proxy elsewhere. Blane, it may be noted, was made Physician to the Fleet after a few months' service and took his M.D. degree at Glasgow after being educated at Edinburgh. Trotter also inveighed against Naval Medical Officers engaging in private practice, then allowed but forbidden the next year, and evidently has an eye on Blane in his dictum that "nothing can be more indecent than a member of a public board traversing the Metropolis in the private practice of his profession . . . it appears to me that the man who decoys a Commissioner of the Sick and Hurt, a Physician of the Fleet or Naval Hospital, to give advice for a guinea is guilty of something that approaches near bribery and liable to prosecution." These pronouncements were hardly likely to curry favour with the powers of the Commissioners of the Sick and Hurt, and to do him justice Trotter seldom adopted an obsequious course, though on one occasion he confessed to having "endeavoured to imitate Dr. Blane in calling upon the Surgeons for occasional remarks" for publication in his "*Medicina Nautica*," and elsewhere observes that Dr. Blane has "very successfully directed his eminent talents" to preserving the health of seamen.

A few words may be added about Trotter's attitude toward Lind (1716-1794), who was very much his senior and had retired from Haslar in 1783, some eleven years before Trotter was appointed there, for it is marked by alternations of praise and rather acid criticism. He speaks of him as "the Father of Nautical Medicine," (3) and elsewhere writes "of great medical abilities that have attended Military services, the Army of the country can boast of a Pringle, a Cleg-horn, and a Monro and some others who have written since the last war, but the name of Lind stands alone in the Navy." (4) Possibly this panegyric also served as a cut at Blane, who had by this time (1792) brought out the second edition of his well-known "Observations on the Diseases of Seamen." On the other hand, Trotter rather unfairly depreciated Lind's treatment of scurvy with lemon juice, and expressed his surprise that Lind had had so many opportunities of examining cases of scurvy after death, and adds, "the plain truth of the matter is, his method of cure was imperfect, for a man dying of scurvy is not known at the present day," yet in a previous sentence he refers to sailors dying from scurvy while being conveyed to Haslar where Lind was in charge. It is certainly very unfair to saddle Lind with the results of failure to carry out the treatment advocated by him. Again while referring to W. Cockburn's writings on scurvy (1706) and the dependence of the disease on the indigestible character of the diet he adds, "from which it is easy to see where Lind took his opinions of the production of the disease." As reference to Cockburn's work shows that scurvy was attributed to salt, this hardly appears justified. Lind's method of disinfecting wards by fumigation was another favourite butt of Trotter's, who preferred fresh air and ventilation and insisted on the value of a hyper-oxygenated atmosphere in enabling the body to resist infection. Lind, it is only right to point out, while emphatic as to the value of fresh air and cleanliness in preventing the spread of infection, fully recognised that these means alone might not be sufficient to destroy the infection, and for this purpose employed fumigation by tobacco burnt with junk, or by charcoal fires strewn with sulphur or arsenic.

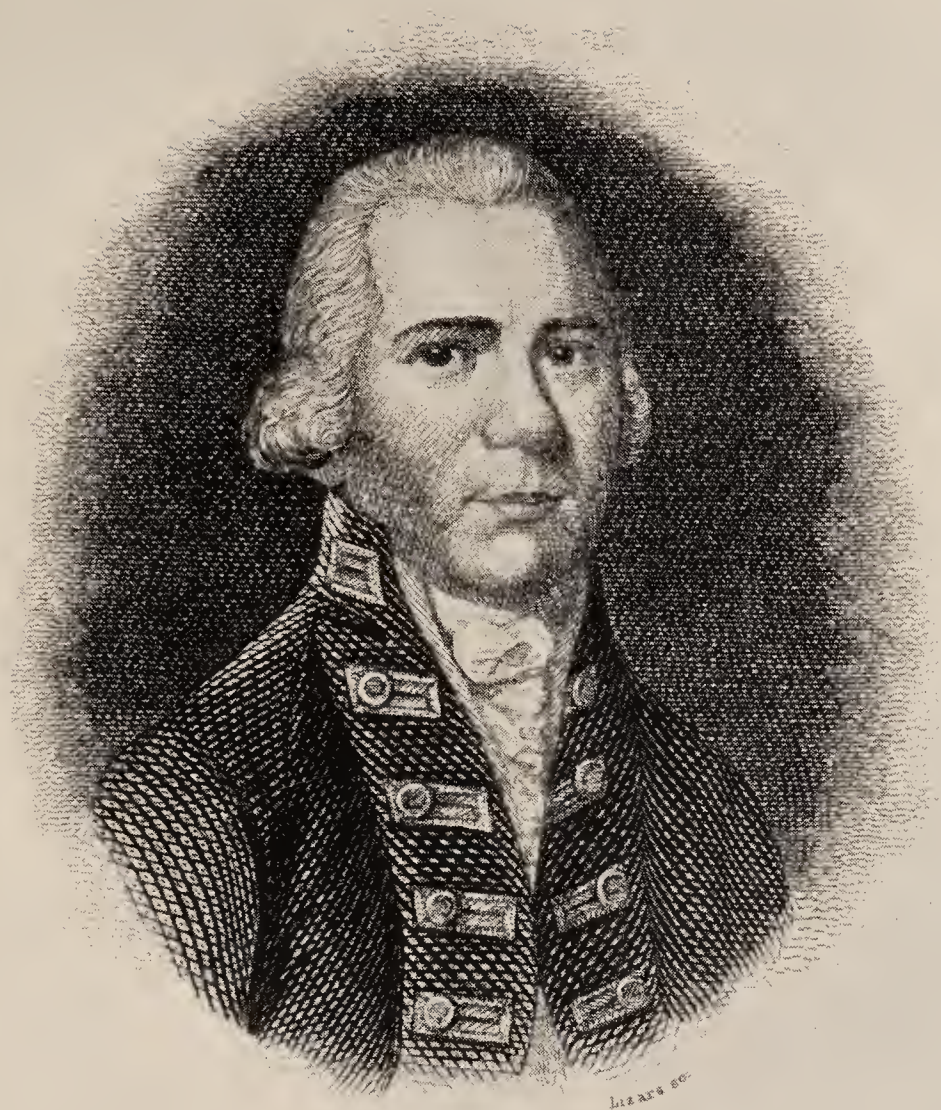
This brief survey of Trotter's relations to Blane and Lind certainly shows him in a rather unattractive light, but it should be remembered that his position must have been very galling and that

the medical spirit of the times was nothing if not outspoken, as is strikingly shown by the fictitious "intercepted letters" written by James Wardrop in the *Lancet*. At any rate it illustrates Trotter's character and his methods as a critic and fighter.

Thomas Trotter was born at Melrose in Roxburghshire in 1760 according to the Dictionary of National Biography, or in 1761 as stated by Cockburn (5) in much the longest and most eulogistic account of him that I have seen. He was the eldest son of John Trotter, another of whose sons, Andrew, also entered the medical profession and practised at North Shields. After attending a school at Kelso Thomas studied medicine at Edinburgh and while there published some short poems in the *Edinburgh Magazine* (1777-8). In 1779 he became Surgeon's Mate in the *Berwick* in the Channel and began his practical acquaintance with scurvy. In 1780 the *Berwick* sailed for the West Indies and in October was much damaged in a hurricane, the medicines and medical comforts being lost. As a result dysentery and scurvy took a heavy toll of the crew on the voyage back to England, and Trotter suffered severely. After refitting the *Berwick* went to the North Sea and took part in the Battle of the Dogger Bank on August 5, 1781, Trotter receiving the public thanks of Commodore Stewart for his services to the wounded. In April, 1782, he was promoted surgeon, but in the following year only 120 of the 750 surgeons in the navy list were allowed on a small half pay, and as peace had led to a great reduction in the number of posts he was left unemployed. He accordingly went in June as surgeon in the *Brooks*, a Liverpool guineaman or slaver, to the Gold Coast, where eleven months were spent in collecting slaves; scurvy began to appear before they sailed and, as Trotter's recommendations to lay in a good stock of fresh vegetables were disregarded, became rampant on the voyage to the West Indies, forty slaves being buried before reaching Antigua, where an abundant supply of fresh fruit was obtained; a fortnight later on their arrival at Jamaica the slaves, now free from scurvy, were sold for high prices. Here Trotter was severely attacked with fever from which he had barely recovered when he arrived in England in September, 1784, so disgusted with the horrors of the slave trade that nothing would induce him to undertake another voyage. Soon afterwards he returned to Edinburgh for further medical

work and published his "Observations on Scurvy" (1786). After practising for a time at Wooler in Northumberland he read his thesis for the M.D. Edinburgh, "*De Ebrietata*" (1788), a subject which *mirabile dictu* had never previously inspired a thesis at this seat of high thinking. In 1789 he was appointed to the *Barfleur*, the flagship of Admiral Roddam at Portsmouth, and had further opportunities of investigating scurvy, thus providing material for the second edition of his brochure on the subject (1792). At this time he investigated the preservation of drinking water in casks with a view of preventing the objectionable taste that the water commonly acquired. This he ascribed to the oxygen of the water being attracted to the wood with the liberation of free hydrogen, and to obviate this he recommended that the inside of the barrels should be burnt or charred. About Christmas, 1793, he was appointed second physician to Haslar, an office which he took up with great energy, making many changes in the organisation as may be seen in his pamphlet, "Remarks on the Establishment of the Naval Hospitals with Hints for their Improvement" (1795), dealing with the Staff and their payment, nursing, baths, diet, and the grounds. Rather optimistically he considered that in the future the baths of Haslar should be as famous as those of Baïæ in the days of ancient Rome. He, however, did not remain long at Haslar, for on April 9, 1794, he became Physician to the Channel Fleet under Lord Howe, this unsolicited appointment being regarded by him as due to his work on scurvy. His term of office was one of great naval activity and he was correspondingly energetic, not only in his routine duties but also in writing; his "Medical and Chemical Essays" appearing in 1795, Volume II of the "*Medicina Nautica*" seeing the light in 1799, and "*Suspiria Oceani; a Monody on the Death of Lord Howe, K.G., Admiral of the Fleet*" (23 pages) in 1800. His work must have been carried out under difficulties, for in June, 1795, while going up the ship's side to the relief of a wounded officer he sustained a rupture which before his retirement in 1802 incapacitated him from boat work.

After his retirement from the Navy he practised as a physician in Newcastle until 1827, when from increasing disabilities he gave up active medical work; after spending some time in Roxburghshire and Edinburgh he returned to Newcastle and died on Septem-



DR. TROTTER

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ber 5, 1832, two years before Blane. During the years succeeding his retirement from the Navy his pen was constantly at work on such various subjects as "A View of the Nervous Temperament" (1807, 3d Edition, 1812, pages 378), "A Proposal for Destroying the Fire and Choak-damp of Coal-mines" (1805), "The Noble Foundling, or the Hermit of the Tweed, a Tragedy in Five Acts" (1812), "A Practical Plan for Manning the Navy and Preserving our Maritime Supremacy without Impressment" (1819), and "Seaweeds, Poems Written on Various Occasions Chiefly During a Naval Life" (1829), with a rather long autobiographical introduction and a line engraving by Lizars representing the author at the age of 37. This (Fig. 1) was presumed by Laughton to be after a portrait by D. Orme, but it differs considerably from a stippled engraving (Fig. 2) by Orme, of which there are three copies in the Royal Society of Medicine, two in the collection of the Royal College of Physicians, and one in the British Museum, published on May 1, 1796, when Trotter was in his thirty-sixth or thirty-seventh year. For this copy I am indebted to my friend Arnold Chaplin, Harveian Librarian at the Royal College of Physicians. The representation in "Seaweeds" is the more attractive of the two, and, as it apparently shows the author in a uniform which was not given to medical officers of the Navy until 1805, (6) it seems not unlikely that it was, if based on Orme's portrait of 1796, modified at the sitter's direction in various ways before it met the public eye in "Seaweeds." But although some time has been spent in attempting to clear up the minor questions raised by these two portraits no definite conclusion is perhaps justified.

As already shown, Trotter was a prolific writer in a wide field of subjects; but although several of his works, "Medicina Nautica," "A View of the Nervous Temperament," "Observations on Scurvy," and his graduation thesis "On Drunkenness," passed into a second edition, they are not easy to obtain. Out of the thirteen books and pamphlets mentioned in Laughton's biography in the Dictionary of National Biography, which omits the "Remarks on Naval Hospitals and Sick Quarters with Hints for their Improvement" (1795), there are eight in the British Museum, while the London Library, The Admiralty Library and the Medical Libraries in London contain as a rule one each, the library at Haslar has two and the

Royal College of Physicians of Edinburgh four of his fourteen publications. After the lapse of 100 years or more many of his views, especially those on chemistry, necessarily appear crude. On the other hand, looking at Trotter across a century containing the era of morbid anatomy which had hardly dawned in his early days and now unfortunately is passing too much into the shade, as has been hinted in the late Sir James Goodhart's Harveian Oration on the passing of morbid anatomy (1912) and recently more decidedly expressed by Christian (7) of Boston, it appears that the pendulum is swinging back to the point of view of Trotter's time, and that chemical and functional problems are taking the place of structural questions. The present discussions in acidosis and the buffer salts have their prototypes in the speculations of the "pneumatic" and other physicians. It is, therefore, interesting to refer here to Trotter's views on scurvy, one of his favourite subjects. He believed that the disease was due to a deficiency in the blood of oxygen, which was regarded as the "acidifying principle," and that this could be made good by the administration of citric acid. While stating that for the prevention of the disease fresh vegetables should be relied on, his experience led him to distrust the use of preserved lemon juice as a prophylactic and he ascribed this failure to its frequent adulteration with acetic acid. For curative purposes he strongly urged concentrated, or as he called it concrete, crystallised citric acid in solution. The Commissioners of the Sick and Hurt Board, among whom was Blane, did not support Trotter's advocacy of pure citric acid. This difference of opinion is curiously paralleled by quite recent events, since Funk's description of vitamines in 1910 scurvy has been regarded as a "deficiency disease" and due to the absence of an antiscorbutic substance contained in lemon and orange juice. But McCollum and Pitz (8) have shown that artificially induced scurvy in guinea pigs can be cured by an imitation orange juice consisting of pure inorganic salts, cane sugar, and crystalline citric acid, thus agreeing with Trotter's ancient contention, and they further conclude that scurvy is not an avitaminosis, but due to bacterial infection resulting from fæcal accumulation caused by unsuitable food. On the other hand, Harden and Zilva (9), after removing the free citric and other acids from lemon juice, found that the residue cured scurvy in infants under Still's care, and so obviously retained its antiscorbutic activity.

Of his numerous works much the largest is "*Medicina Nautica*," in three volumes with over 1400 pages in all, which came out in 1791, 1799, and 1803, and passed into a second edition in 1804; in 1798 the first volume was translated by Warner into German, with a preface by Hufeland, who, while faintly commending it, reserves most of his praise for the translator on account of the unusual difficulties he had to encounter in the author's style, which is said to be often obscure and abounding with "many almost incomprehensible nautico-technical expressions." It is a collection of articles on naval medicine, parts of which recall the works of Lind and Blane. Thus it contains the medical history of the Fleet from January, 1794, to the termination of the war in April, 1802, and so resembles Blane's "*Observations on the Diseases of Seamen*," based on a detailed account of the health and diseases of the Fleet from 1780 to 1783. Trotter also describes various diseases, especially fevers and scurvy, in a text-book manner, thus again resembling Lind's and Blane's books. In addition he introduces into the second and third volumes cases by naval surgeons, so that to some extent these volumes resemble the proceedings of a medical society in which the president does most of the talking. Incidentally it contains items of autobiography, such as a list of the sixty-eight subscribers to a massy urn with a Latin inscription presented to him by naval surgeons on his retirement in 1802. These volumes perhaps naturally repeat a good deal of what he had previously written in scattered publications. The two following clinical cases may perhaps be quoted:

In "a case of supposed phthisis from swallowing a plum-stone," (10) vigorous treatment with digitalis caused violent vomiting and the expulsion of a plum-stone, which had presumably induced purulent bronchiectasis; and from this time the patient previously regarded as certain to die steadily recovered. Digitalis was thought to have rendered the most prominent features of the disease stationary, but in the light of the present day it did good by its emetic effects which led to the removal of the plum-stone.

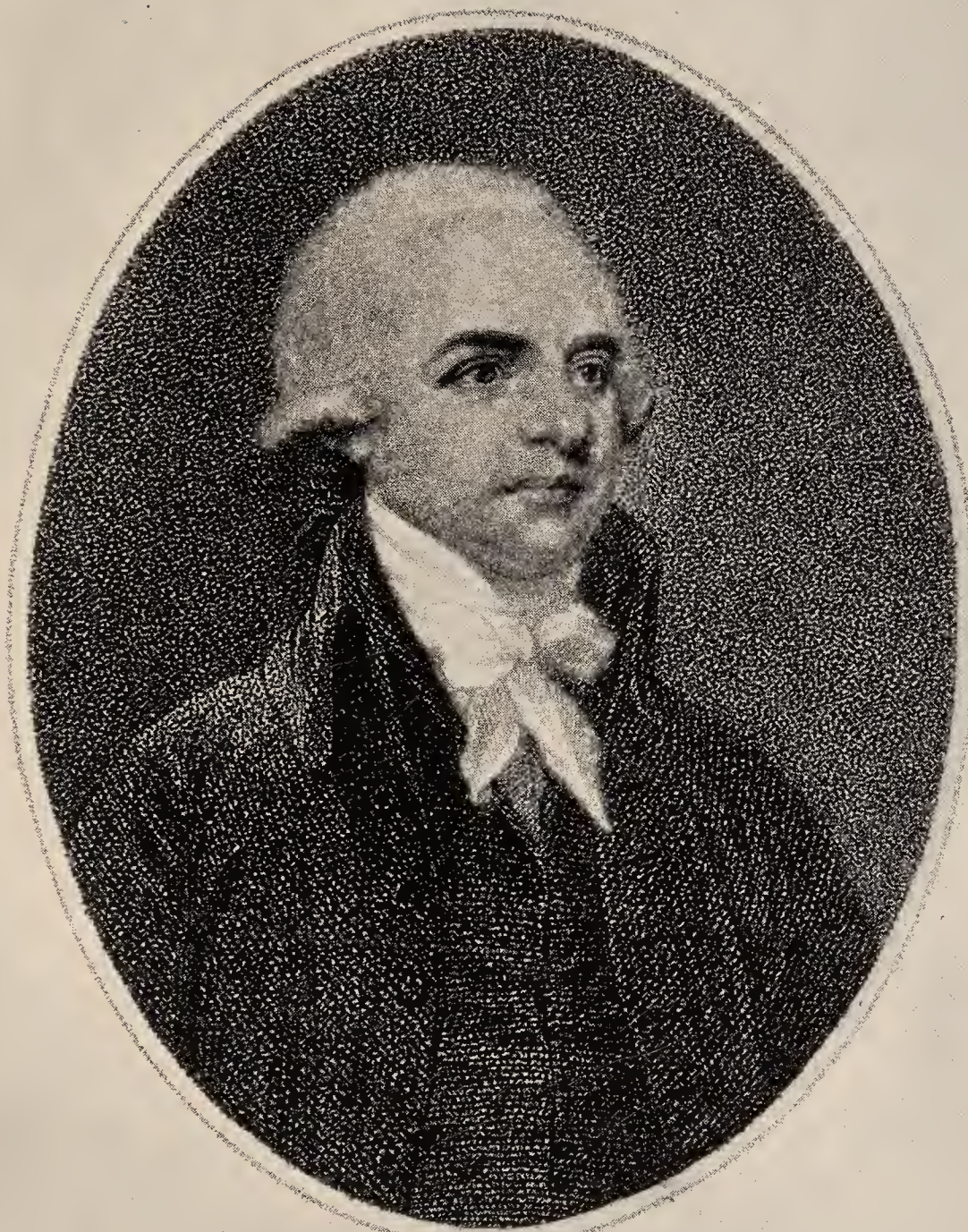
In the "*Medical and Chemical Essays*" (1795) he describes the case of a blue boy who died in Haslar apparently with ante-mortem clot in the right auricle, "two vesicles like hydatids near the opening of the pulmonary artery, each about the size of a large oval bean," pulmonary

apoplexy, right pleural effusion, and œdema, and adds, "I shall make no comment on this singular case, but leave the pneumatic physician to account whether this obstruction in the auricle was the cause of the blood not being fully oxygenated by the blood."

His considerable work entitled "A View of the Nervous Temperament, being a Practical Enquiry into the Increasing Prevalence, Prevention and Treatment of those Diseases Commonly Called Nervous, Bilious, Stomach and Liver Complaints, Low Spirits and Gout," provides solid reading. He finds that the eighteenth century was remarkable for the increase of nervous diseases and that whereas in the "English Malady" (1733) George Cheyne of Bath and London estimated that one-third of the upper classes were thus affected, Trotter says that nervous diseases constitute two-thirds of all the disorders of civilised society, attack the poor as well as the well-to-do, and are tending rapidly to abridge the physical strength and mental capacities of the human race. The remedy is a return to the simple life.

The appearance in 1805 of his pamphlet of 47 pages, "A Proposal for destroying the Fire and Choak-damp in Coal-mines," by fumigation and water at 40° F. run in by a fire-engine, was followed by a wordy warfare; in 1806 "A Friend to Rational Improvement" attacked Trotter in a brochure of 46 pages, and almost at the same time H. Dewar, M.D., Honorary Physician to the Manchester Infirmary (1804-6), poured out 53 pages of chemical and other strictures on Trotter's proposals. To these Trotter at once replied, but the "Friend to Rational Improvement" had the last word in August, 1806. These five polemic exercises are bound up in one volume in the Library of the Royal Medical Society of Edinburgh; but they have long been buried in oblivion, as in 1815 Sir Humphry Davy brought out his safety lamp for miners, which also raised a small storm for priority with George Stephenson, the future pioneer of railway enterprise, and in its turn has been superseded by the electric light.

"The Practicable Plan for Manning the Royal Navy and Preserving our Maritime Supremacy without Impressment" (1819) is not without interest in connexion with recent events, for it gives an account of the general mutiny in the Royal Navy in 1797 for increase of pay and rations, of which Trotter as serving under



Orme Junr. sculpt. 1796.

Thos. Trotter. M.D.
(PHYSICIAN to the GRAND FLEET.)

Published as the Act directs May 1. 1796.

Admiral Lord Howe must have had first-hand experience. He uses the mutiny as an obvious argument against the press-gang system, which naturally led to discontent and favoured the occurrence of such disturbances, and advocates a voluntary system based on Pitt's emergency Bill of Requisition in 1795. This paper also reiterates the suggestion of a uniform for sailors which, however, did not become established until about 1857; before that date the captain of each ship determined the style of clothes or "slops"—often somewhat piratical—of the crew. As far back as 1774 Lind (11) had suggested that the seamen of His Majesty's service should be put into a uniform sea habit with some little movable badges to show their ship, and urged this with a view of preventing the spread of infection by filthy clothing. This was supported by Blane and elaborated by Trotter, (12) who proposed that the uniform, manufactured of a particular form of cloth, should consist of a blue jacket, with a sleeve and cape of the same, and lined with thin white flannel; a waistcoat of white cloth, trimmed with blue tape; blue trousers, or pantaloons, of the same cloth as the jacket, for winter; and linen or cotton trousers, either striped blue and white or all white for summer. A button of metal, or horn less liable to tarnish, with the letters R. N. upon it. The hat small and round, waterproof, with a narrow belt on which should be printed the name of the ship, which could be conveniently shifted when a man turned over to another ship. It would appear that after the decent interval of sixty years Trotter's suggestions were largely adopted. He argued that in addition to the sanitary advantages the adoption of this uniform would be considered an honourable distinction, engender *esprit de corps*, and render desertion less easy.

After what has been said it is hardly necessary to insist at length on Trotter's long-continued interest in the welfare of the men, and especially of the Medical Department, of the Navy, dating from his pamphlet, "A Review of the Medical Department in the British Navy, with a Method of Reform Proposed," published in 1790, when he was about thirty years old. At Haslar he did much in improving the care of the patients and urged the institution of medical libraries and medical schools there and at Plymouth. The want of proper discipline at these hospitals which were staffed by rather turbulent officials, both male and female, and full of law-

less sailors anxious to escape from what they regarded as a prison, was a serious question and, although the reform was not always free from friction, Trotter appears to have been fully justified in reporting on December 26, 1794, that the presence of an executive officer was necessary to keep the seamen in order. The appointment of Captains, R. N., as Governors of the Naval Hospitals at Haslar and Plymouth occurred in 1795, the title being changed in 1820 to Captain-Superintendent, and continued until 1869, when the sole control was vested in a medical authority—an Inspector-General of Hospitals and Fleets. While in charge of the Fleet Trotter did his utmost to improve the sanitary and dietetic conditions of the men, stimulated the medical officers to an interest in their professional duties and insisted in demanding an increase in their pay so that they should be on an equality with the medical officers of the Army. That these efforts were appreciated by the medical officers seems clear, for on two occasions at least they shewed their esteem in a practical form: in 1797 fifteen surgeons of His Majesty's Ships at the Cape of Good Hope sent him a gold snuff box "in gratitude for long and unwearied exertion on behalf of the surgeons" and, as already mentioned, he was the recipient of a massy urn on his retirement in 1802. Jennerian vaccination at once found in him a warm advocate, but his attempt to introduce it into the Fleet was not encouraged by the higher authorities; he suggested that "as titles and pensions have rapidly crowned the heroes of the war, the Minister of Peace (the accomplished Mr. Addington, the son of a physician) should hasten to reward the benefactor of mankind with a suitable dignity." Acting up to his own doctrine he inspired 89 naval surgeons to present Edward Jenner with a gold medal in 1801. In 1819 Blane urged the importance of vaccination in the Navy, but it did not become compulsory till about 1858. In another direction Trotter successfully faced unpopularity and, as he records, the prophecy that he would be found murdered in the streets, by getting the licensed gin-shops in Plymouth reduced from 300 to 100. After 1795 as a result of the adoption of the precautions urged by Lind more than forty years before, scurvy disappeared from the Navy, but it still occurred in the ships of the East India Company, and Trotter had the foresight to urge that a commercial country such as Britain should

have a Board of Health to supervise the well-being of the Mercantile Marine, especially on long voyages during which scurvy was prone to occur. In conclusion, whatever his faults of taste, Trotter was a reformer and deserved well of the Navy for his tenacity and energy.

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